COMPUTER AIDED DESIGN SYSTEM AND COMPUTER AIDED DESIGN PROGRAM
USING A GEOMETRIC SURFACE MODEL

BACKGROUND OF THE INVENTION

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TECHNICAL FIELD

The present invention relates to a computer aided design
system and a computer aided design program which transform the
shape of a member into an objective curved surface shape.

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BACKGROUND ART

Today, there is a desire to shorten processes from
planning to design and production to respond to consumer
demand. In order to improve the efficiency of design and
15 production processes, the use of CG (Computer Graphics) and
CAD (Computer Aided Design) systems is popular. In order to
depict shapes having complex curved lines or curved surface
shapes, such as for motor vehicles, domestic electric
appliances, or the like, on a computer, the following
20 processing methods have conventionally been used.

The first method is solid modeling, where simple shapes
called primitives are held in a computer, and operations to
combine the shapes with each other are repeated in order to
express complex shapes. A primitive is for example a column,
25 a cube, a hexahedron, a torus, a ball, or the like, and in
solid modeling shapes are represented by set operations on
these primitives. Therefore, in order to produce a complex